



In The United States Patent And Trademark Office

In Re Application: Tianqing He et al.

Filing Date: 11/15/03

Examiner: Jiping Lu

Serial No: 10/714,471

Art Unit: 3749

Invention: Device And Method For Rapid Drying Of Porous Materials

### AFFIDAVIT

NOW COMES the undersigned, who affirms and says:

1. My name is Jan T. Womble. I am employed as a field engineer by the North Carolina Department of Transportation. I have had experience in the paving business for more than 15 years, with ten years of those being in the Quality Assurance Asphalt Laboratory.
2. In asphalt paving, it is important to be able to obtain the density of the asphalt. However, to obtain the density, it is important that the asphalt specimens be dried to achieve density. I am familiar with the processes and equipment that were used to dry asphalt prior to the introduction of the Core Dry vacuum dryer by InstronTek. We have re-tested hundreds of asphalt specimens that that were fan dried and with the introduction of the CoreDry it has become apparent that fan drying is not very effective in completely drying the specimens, as required in the specifications. CoreDry is by far the most effective way to completely dry asphalt specimens.
3. Having used the CoreDry for over a year with countless samples, I am familiar with its operation in the lab and field settings.
4. The Core Dry vacuum dryer constitutes an important advance in asphalt testing. Before the Core Dry vacuum dryer, asphalt samples had to be placed in front of a fan, which could take hours. With the Core Dry vacuum dryer, it is possible to obtain a dry sample of asphalt for a density test in less than 15 minutes.
5. The Core Dry vacuum dryer has met a long-standing need in the field to be able to quickly and effectively dry asphalt samples to perform density tests. Before the

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NOW COMES the undersigned, who affirms and says:

1. My name is Christopher Bacchi and I am employed as the Laboratory Director for Trimat Materials Testing in Raleigh, NC. I have more than 8 years of asphalt laboratory testing experience.
2. For all paving operations, obtaining the proper compaction, or density, is vital to overall quality. Prior to the introduction of the Core Dry, testing for density usually took at least one full day, since cores would have to be dried sufficiently prior to testing using conventional methods, such as an oven or fan.
3. I am familiar with the operation of the Core Dry and have used it in my lab and in the field.
4. The Core Dry constitutes an important advance in asphalt testing. Prior to the Core Dry, asphalt core samples would have to be dried in an oven or in front of a fan and usually take up to 24 hours. With the Core Dry, it is possible to obtain a dry sample for density testing in less than 1 hour.
5. The Core Dry has met a long standing need in the field and lab to be able to quickly and effectively dry asphalt core samples for density testing. Before the Core Dry was introduced, there was no other effective device available to dry an asphalt core sample in the same or similar amount of time.

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NOW COMES the undersigned, who affirms and says:

1. My name is Ali Regimand. I am the president of InströTek, Inc. and a co-inventor for the Device and Method for Rapid Drying of Porous Materials filed in the United States Patent Office with Serial #10/714,471.
2. The Vacuum Drying Apparatus and Method disclosed and claimed in serial #10/714,471 has been successfully manufactured and marketed as the "CoreDry" by InströTek, Inc., the company which I am President. The CoreDry is priced at \$4910 per unit and since its marketing launch in 2004, my company has sold a total of 120 units. The volume for this product is expected to quadruple in the next 3 years because of the newly developed ASTM standard, described below, and Department of Transportation Specifications currently being developed in many of the states.
3. CoreDry does not have a price advantage over other vacuum dryer models on the market because the CoreDry, to my knowledge, is the only vacuum dryer for porous materials like asphalt currently being sold. The CoreDry has been successful in the market because it represents an advance in the art and has provided the users a fast and more accurate method of testing asphalt samples.
4. Attached as Exhibit A is the newly developed American Society for Testing and Materials (ASTM) standard practice, specifically developed for the CoreDry. To my knowledge, there are no other ASTM specifications for other Vacuum Drying Apparatus, since there are no other vacuum devices or processes available for asphalt drying.

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